

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) An ultrasonic standing-wave atomizer arrangement (10) for producing a paint spray mist for painting a workpiece, with a sonotrode (1), with a component (2) arranged lying opposite the sonotrode (16, 28, 38), a standing ultrasonic field being formed in the intermediate space between the sonotrode (1) and the component (2) in the case of operation, and with at least one paint feeding device, which introduces the paint into the intermediate space for the atomizing process at at least one paint discharge point, ~~characterized in that~~ wherein there is an air supply device, which interacts with at least one air distribution device, ~~in that~~ wherein the air distribution device has a number of clearances, which serve for blowing out air, ~~in that~~ wherein the clearances are arranged in such a way that between the at least one paint discharge point and the sonotrode and also between the at least one paint discharge point and the component there is formed at least one region with a blocking air flow, by which air flow wetting of the sonotrode or of the component with paint is substantially avoided.
2. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in claim 1, ~~characterized in that~~ wherein the at least one air

distribution device is a box-shaped hollow body or a corresponding piece of pipe.

3. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in claim 1 ~~or 2, characterized in that~~ wherein there are two air distribution devices, by which two blocking air flows that are independent of one another are formed.
4. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in ~~one of the preceding claims~~ claim 1, ~~characterized in that~~ wherein the ~~clearance~~ clearances are configured as round nozzles.
5. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in ~~one of the preceding claims~~ claim 1, ~~characterized in that~~ wherein the ~~clearance~~ clearances at an air distribution device are arranged in at least one row, ~~in that~~ wherein the ~~clearance~~ clearances in a row under consideration are arranged at the same distances from one another along an imaginary straight line, and ~~in that~~ wherein a blocking air flow is formed by each row.
6. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in ~~one of the preceding claims~~ claim 1, ~~characterized in that~~ wherein

the at least one air distribution device is at such a distance from the at least one paint discharge point and from the sonotrode or from the component that the thickness of the air flow required to avoid wetting is obtained, and ~~in that~~ the thickness can be empirically determined.

7. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in ~~one of the preceding claims~~ claim 1, ~~characterized in that~~ wherein the clearances at an air distribution device are arranged along at least two imaginary straight lines, ~~in that~~ wherein the at least two lines are parallel to one another, and ~~in that~~ wherein, seen in the transverse direction in relation to the imaginary lines, the clearances of one of the imaginary lines are arranged offset in relation to the clearances of at least one of the other imaginary lines.
8. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in ~~one of the preceding claims~~ claim 1, ~~characterized in that~~ wherein the clearances at one air distribution device are arranged along two imaginary straight lines, ~~in that~~ wherein the at least two lines are parallel to one another, and ~~in that~~ wherein the blocking air flows caused by the respective rows are directed slightly against one another, so that the overall thickness of the overall blocking air flow formed by the individual blocking air flow, in particular in the intermediate space, is comparatively small.

9. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in ~~one of the preceding claims~~ claim 1, ~~characterized in that~~ wherein an air distribution device is displaceable and/or pivotable for the purpose of influencing the form of the paint spray cone of the atomized paint, in particular is pivotable about a pivot axis parallel to one of the straight line.
10. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in ~~one of the preceding claims~~ claim 1, ~~characterized in that~~ wherein there is at least one directing-air distribution device, which interacts with the at least one air supply device, ~~in that~~ wherein the directing-air distribution device has a number of passages, which serve for the directed blowing out of air and the blown-out air ~~formed for~~ for influencing the form of the atomized paint from at least one region with a directing air flow.
11. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in ~~one of the preceding claims~~ claim 1, ~~characterized in that~~ wherein the at least one directing- air distribution device is a box-shaped hollow body or a corresponding piece of pipe.
12. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in ~~one of the preceding claims~~ claim 1, ~~characterized in that~~ wherein the passages are configured as round nozzles.

13. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in ~~one of the preceding claims~~ claim 1, ~~characterized in that~~ wherein the at least one region of the directing air flow is formed approximately in the form of a cuboid or in the form of a fan by corresponding arrangement of the passages.
14. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in ~~one of the preceding claims~~ claim 1, ~~characterized in that~~ wherein the passages of a directing-air distribution device are arranged along at least one imaginary straight ~~lines~~ line, ~~in that~~ wherein this imaginary line is being parallel to the clearance of the air distribution device assigned to the directing-air distribution device likewise arranged along a further imaginary line, and ~~in that~~ wherein, seen in the transverse direction in relation to the imaginary ~~lines~~ line, the passages are arranged offset in relation to the clearances.
15. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in ~~one of the preceding claims~~ claim 1, ~~characterized in that~~ wherein the regions of the directing air flows, optionally also in combination with the regions of blocking air flows, form a tunnel-like overall region of an air flow enclosing the atomized paint.

16. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in ~~one of the preceding claims~~ claim 1, ~~characterized in that~~ wherein the at least one directing-air distribution device is displaceable and/or pivotable for the purpose of influencing the form of the paint spray cone, in particular is pivotable about the longitudinal axis of the respective directing-air distribution device.
17. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in ~~one of the preceding claims~~ claim 1, ~~characterized in that~~ wherein the at least one air distribution device and/or the at least one directing-air distribution device are respectively subdivided into at least two segmental elements, ~~in that~~ wherein each segmental element has at least one clearance or a passage, and ~~in that~~ wherein the outflow direction of the air is separately settable for each segmental element of an air distribution device or a directing-air distribution device, in particular by pivoting them.
18. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in ~~one of the preceding claims~~ claim 1, ~~characterized in that~~ wherein the at least one air distribution device or the at least one directing-air distribution device ~~as is~~ is a blocking element, which blocking element blocks or releases at least one clearance or a passage for influencing the outflow of air.

19. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in claim 18, ~~characterized in that~~ wherein the blocking element is configured as a rotation block.
20. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in ~~one of the preceding claims~~ claim 1, ~~characterized in that~~ wherein the at least one directing- air distribution device has a directing air element, which is pivotably mounted in a holding element, ~~in that~~ wherein at least two different arrangements of apertures are arranged on the directing-air distributing element, ~~in that~~ wherein each arrangement of apertures is formed as a region with a defined directing air flow and ~~in that~~ wherein, depending on the pivoting position of the directing-air distributing element concerned, the outflow of air is released.
21. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in claim 20, ~~characterized in that~~ wherein the holding element is pivotable about the pivot axis of the directing-air distributing element.
22. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in claim 20 ~~or 21~~, ~~characterized in that~~ wherein the holding element has a passage point, within which ~~a released~~ an opened arrangement of apertures is movable for adjusting purposes.

23. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in ~~one of the preceding claims~~ claim 1, ~~characterized in that~~ wherein a first distributor element, which interacts with the air supply device, is provided, ~~in that~~ wherein the first distributor element reaches around the sonotrode and/or the component and ~~in that~~ wherein arranged on the distributor element are first passages, through which air can be blown out in a directed manner, and ~~in that~~ wherein the directed air serves for forming an air cushion between the end face of the sonotrode or of the component that is facing the intermediate space and the at least one paint discharge point.
24. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in ~~one of the preceding claims~~ claim 1, ~~characterized in that~~ wherein the component and/or the sonotrode interacts with the air supply device, ~~in that~~ wherein second passages through which air flows out in a directed manner are arranged on the component and the sonotrode, respectively, and ~~in that~~ wherein the air flow flowing out in a directed manner serves for the formation of an air cushion between the end face of the component that is facing the intermediate space and the at least one paint discharge point.
25. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in ~~either of claims 23 and 24~~ claim 23, ~~characterized in that~~ wherein the first distributing elements are subdivided into segments, which are respectively supplied with air separately.

26. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in ~~one of the preceding claims~~ claim 1, ~~characterized in that~~ wherein a second distributing element is arranged on the side of the intermediate space lying opposite the spraying direction of the atomized paint, ~~in that~~ wherein the second distributing element serves for producing an air flow which completely encloses the atomized paint in the vicinity of the at least one paint discharge point and at least partly carries it along.
27. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in claim 26, ~~characterized in that~~ wherein the profile of the air flow can be set by the arrangement and alignment of apertures on the side of the second distributing element facing the at least one paint discharge point.
28. (Currently Amended) The ultrasonic standing-wave atomizer as claimed in claim 26 ~~or 27~~, ~~characterized in that~~ wherein the air flow has a twist about the longitudinal direction of the spraying direction, which twist ~~stabilises~~ stabilizes the air stream concerned.
29. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in ~~one of the preceding claims~~ claim 1, ~~characterized in that~~ wherein the free ends of pieces of pipe are arranged in the vicinity of the at least one paint discharge point, through which pieces of pipe air flows out in a directed

manner, and ~~in that~~ wherein the outflowing air to a great extent prevents a recombination of atomized paint from different sheets of paint.

30. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in ~~one of the preceding claims~~ claim 1, ~~characterized in that~~ wherein at least one device for air distribution ~~are~~ is arranged in the paint spraying direction below the intermediate space, and ~~in that~~ wherein the air distribution device spatially re-forms the spray cone of the atomized paint after the atomization phase in the intermediate space and if need be accelerates the paint particles.